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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,122	07/31/2003	Steven M. Chester	1023-200US01	1851
28863	7590	02/10/2005	EXAMINER	
SHUMAKER & SIEFFERT, P. A. 8425 SEASONS PARKWAY SUITE 105 ST. PAUL, MN 55125			STRAIGHTIFF, MICHAEL PAUL	
			ART UNIT	PAPER NUMBER
			3739	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/632,122	CHESTER ET AL.	
	<b>Examiner</b> Michael P. Straightiff	<b>Art Unit</b> 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 30 September 2004.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-30 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-6,9-11,13-21 and 24-30 is/are rejected.

7)  Claim(s) 7,8,12, and 22-23 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 31 July 2003 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/30/04, 7/6/04.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: *IDS - 12/22/03.*

## DETAILED ACTION

### *Specification*

1. The use of the trademark VELCRO has been noted in this application (Page 4, Paragraph [0021]). It should be capitalized in its entirety wherever it appears and be accompanied by the generic terminology (hook and loop fastener).

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,292,973 to Yamauchi et al.

a. In regard to Claim 26, Yamauchi et al. disclose “[A] method comprising: receiving a pressurized coolant at a first temperature, expanding the pressurized coolant to generate a depressurized gaseous coolant at a second temperature, and delivering the depressurized gaseous coolant to a patient.” The recited method steps are considered inherent in the operation of the device disclosed by Yamauchi et al. (See Claim 1 Rejection).

- b. In regard to Claim 27, Yamauchi et al. further disclose "measuring a temperature" and "controlling the expansion of the pressurized coolant as a function of the temperature" (See Yamauchi et al., Column 6, Lines 44-48). The Examiner concludes that the heating of the "evaporating chamber" as disclosed by Yamauchi et al. "control[s] the expansion of the pressurized coolant as a function of temperature".
- c. In regard to Claim 28, Yamauchi et al. further disclose "the temperature being measured proximate to the patient" (See Yamauchi et al., Figure 3 Reference 41; Reference 2 indicating the conduit to the patient).
- d. In regard to Claim 29, Yamauchi et al. further disclose "mixing the depressurized gaseous coolant with air" (See Yamauchi et al., Figure 1, Reference 23; See also Column 3, Lines 62-68).
- e. In regard to Claim 30, see Claims 28 and 29 Rejections.

#### ***Claim Rejections - 35 USC § 103***

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-6, 11, 13-18, 20-21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,292,973 to Yamauchi et al. in view of U.S. Patent Application No. US 2001/0039439 to Elkins et al.

a. In regard to Claim 1, Yamauchi et al. disclose “[A] device comprising: a valve to receive a pressurized coolant at a first temperature and to discharge a depressurized gaseous coolant at a second temperature” (See Yamauchi et al., Figure 1, Reference 20; See also Column 3, Lines 38-40), and “a plenum to receive the depressurized gaseous coolant and to combine the depressurized gaseous coolant with air at a third temperature” (See Yamauchi et al., Figure 1, Reference 23; See also Column 3, Lines 62-68). Yamauchi et al. further disclose an applicator to apply the coolant to a patient’s body (See Yamauchi et al., Figure 1, Reference 1; See also Column 3, Lines 42-44). Yamauchi et al. do not explicitly disclose “a garment”. Elkins et al. teach “a garment for placing in contact with a body of a patient” (See Elkins et al., Figure 1A; See also Paragraph [0007], Lines 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide “a garment” as taught by Elkins et al. on the device disclosed by Yamauchi et al. in order to expose a larger area of the patient’s body with a cooling treatment.

- b. In regard to Claim 2, Yamauchi et al. further disclose "in which the coolant comprises at least one of oxygen, nitrogen, air, and carbon dioxide" (See Yamauchi et al., Column 3, Lines 34-38).
- c. In regard to Claim 3, Yamauchi et al. further disclose "in which the pressurized coolant comprises a pressurized liquid gas" (See Yamauchi et al., Column 3, Lines 34-38).
- d. In regard to Claim 4, Yamauchi et al. further disclose "a coolant supply to store the pressurized coolant" (See Yamauchi et al., Figure 1, Reference 3; See also Column 3, Lines 34-38), "and a supply conduit to transport the pressurized coolant to the valve" (See Yamauchi et al., Figure 1, Reference 5; See also Column 3, Lines 39-41).
- e. In regard to Claim 5, though neither Yamauchi et al. nor Elkins et al. explicitly disclose "the valve is disposed less than two meters from the garment", it is considered by the Examiner to be within a range inherent in both devices (See Yamauchi et al. Figure 1, See also Column 8, Lines 3-10).
- f. In regard to Claim 6, Yamauchi et al. further disclose "a coolant delivery conduit to convey the combined gaseous coolant and air from the plenum to the garment" (See Yamauchi et al. Figure 1, Reference 2).
- g. In regard to Claim 11, Yamauchi et al. disclose "[A] system comprising: a valve" (See Yamauchi et al., Figure 1, Reference 20; See also Column 3, Lines 38-40), and "a plenum" (See Yamauchi et al., Figure 1, Reference 23; See also Column 3, Lines 62-68). Yamauchi et al. do not explicitly disclose "a controller to

control the valve as a function of a signal from a temperature sensor." Elkins et al. teach "a controller to control the valve as a function of a signal from a temperature sensor" (See Elkins et al., Paragraph [0035], Lines 12-18; See also Paragraph [0036], Lines 10-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a controller as taught by Elkins et al. on the device disclosed by Yamauchi et al. in order to control the valve as a function of a signal from a temperature sensor.

- h. In regard to Claim 13, Yamauchi et al. disclose "[A] system" (See Claim 11 Rejection). Yamauchi et al. do not explicitly meet the limitation of "a garment for placing in contact with a body of a patient to circulate the combined gaseous coolant and air proximate to the body of the patient." Elkins et al. teach "a garment for placing in contact with a body of a patient to circulate the combined gaseous coolant and air proximate to the body of the patient" (See Elkins et al., Figure 1A; See also Paragraph [0007], Lines 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a garment as taught by Elkins et al. on the device disclosed by Yamauchi et al. in order to expose a larger area of the patient's body with a cooling treatment.
- i. In regard to Claim 14, Elkins et al. further disclose "the temperature sensor is disposed within the garment" (See Elkins et al., Paragraph [0036], Lines 20-23).
- j. In regard to Claim 15, see Claim 5 Rejection.

- k. In regard to Claim 16, Elkins et al. further disclose "an input device, in which the controller receives commands from an operator via the input device" (See Elkins et al., Paragraph 0049], Lines 6-9).
- l. In regard to Claims 17 and 18, see Claim 4 Rejection.
- m. In regard to Claim 20, see Claim 2 Rejection.
- n. In regard to Claim 21, see Claim 3 Rejection.
- o. In regard to Claim 24, Elkins et al. further disclose "a second sensor, in which the controller controls the valve as a function of a signal from a second sensor" (See Elkins et al., Paragraph [0036], Lines 10-20).

6. Claims 9-10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,292,973 to Yamauchi et al. in view of U.S. Patent Application No. US 2001/0039439 to Elkins et al. as applied to Claims 1 and 11 above, and in further view of U.S. Patent No. 5,287,705 to Roehrich et al.

- a. In regard to Claims 9-10 and 19, Yamauchi et al./Elkins et al. disclose "[A] device" (See Claim 1 Rejection). They do not meet the limitation "comprising a motor, in which the discharge of the depressurized gaseous coolant from the valve drives the motor" of Claims 9 and 19 or "comprising an air-moving device to move at least one of the depressurized gaseous coolant and the air" of Claim 10. Roehrich et al. teach a motor or air-moving device driven by the discharge of the depressurized gaseous coolant (See Roehrich et al., Column 6, Lines 24-31). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to provide a vapor motor as taught by Roehrich et al. on the device disclosed by Yamauchi et al./Elkins et al. in order to circulate a desired medium.

***Allowable Subject Matter***

7. Claims 7-8, 12, and 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

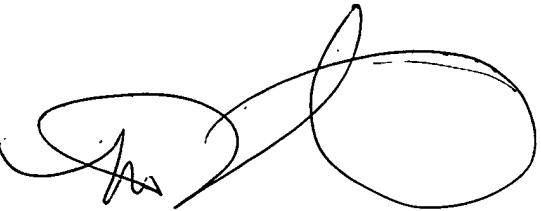
***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Straightiff whose telephone number is (571) 272-4774. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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